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Technology Center 2100

REPLY UNDER 37 C.F.R. 1.111

Sir:

This responds to the Office Action of October 1, 2003. Claims
1, 2, 4 and 6-15 are pending in the Application. In light of the
following remarks, reconsideration and allowance of the application
is respectfully requested.

Turning to the Office Action, Claims 1, 2, 4, 6, 7 and 12-15
were rejected under 35 U.S.C. §102(a) as anticipated by "The
IntelliMedia WorkBench A Generic Environment For Multimodal
Systems", by Brondsted et al. (Office Action ¶3) Claims 8-10 were
rejected under 35 U.S.C. §103(a) as unpatentable over Brondsted in
view of "Toward Natural Gesture/Speech HCI: A Case Study Of Weather
Narration" by Poddar et al. (Office Action ¶4) Claim 11 was

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acknowledged in the Office Action as including allowable subject matter. (Office Action ¶5)

The rejections of Claims 1, 2, 4, 6, 7 and 12-15 as anticipated by Brondsted are considered first. Among other things, Claim 1 recites "receiving additional external information that characterizes at least one machine-sensible feature of a target". The "additional external information" recited in Claim 1 is "additional" to sensing a triggering event that includes sensing a gesture indicating a direction of the target. The "additional external information" recitation of Claim 1 may include speech, for example. In that case, the speech "characterizes at least one machine-sensible feature of a target".

Although Brondsted refers to both gesture and speech recognition, the claimed invention is clearly distinguishable. The application presented in Section 2.1 of Brondsted is a "Campus Information System" where a user, for example, inquires about routes from one location to another, where a given person's office is located, etc. Brondsted describes a user querying the system by speech input (such as "Show me Hanne's office") as well as gesture input (such as "pointing coordinates"). However, the spoken query inputs described in Section 2.1 of Brondsted (such as "Show me Hanne's office") do not characterize a machine-sensible feature of a target. Thus, the spoken query inputs in this section of Brondsted do not teach "receiving additional external information

that characterizes at least one machine-sensible feature of a target", as recited in Claim 1.

The application presented in Section 2.2 of Brondsted ("Automatic Pool Trainer") is also far afield from the claimed invention. In this application, when the user points the cue toward the cue ball, the system calculates and displays the trajectories of the pool balls based on the direction of the cue. There is also reference to the user issuing spoken commands to the system, without any further elaboration apart from the Section 3 statement that they are "keywords". Thus, even assuming arguendo (but not conceding) that the cue ball is considered a "target" and the cue provides a gesture indicating a direction of the target, there is no "receiving additional external information that characterizes at least one machine-sensible feature of a target" as recited in Claim 1.

As noted above, at least the Claim 1 recitation "receiving additional external information that characterizes at least one machine-sensible feature of a target" is not shown in the particular applications of Brondsted. Nonetheless, the Office Action points to Section 3 of Brondsted as purportedly teaching this aspect of Claim 1. In support of this position, paragraph 3 of the Office Action states that because Brondsted is a multimodal system it "can" receive additional information about a target or

location through spoken word input as well as through gesture input.

However, Brondsted's mere provision of a multimodal system comprised of a speech recognizer and a gesture recognizer (among other modules described in Section 3) does not in itself teach "receiving additional external information that characterizes at least one machine-sensible feature of a target". As noted above, the actual applications of the modules in the Campus Information System and the Automatic Pool Trainer of Brondsted do not teach "receiving additional external information that characterizes at least one machine-sensible feature of a target".[1]

Because Brondsted fails to show at least the above-noted recitations of independent Claim 1, Brondsted fails to anticipate Claim 1. Reconsideration and allowance of independent Claim 1 is respectfully requested.

Independent Claims 12 and 13 were also rejected in paragraph 3 of the Office Action as anticipated by Brondsted. Independent Claims 12 and 13 include recitations that provide analogous distinctions as discussed above for Claim 1 and are distinguished from Brondsted for at least analogous reasons. Reconsideration and allowance of Claims 12 and 13 is respectfully requested.

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[1] The information storage and the straight-forward processing of inputs (such as "room-numbers" and "names") described for the Domain Model module in Section 3 likewise does not teach "receiving additional external information that characterizes at least one machine-sensible feature of a target".

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As to independent Claim 14, independent Claim 14 recites "inputting spatial information to indicate a position of a target", where the spatial information "includes sensing a gesture indicating a direction of said target". Claim 14 also recites "inputting further information about said target" and use of said further information in a particular manner "to reduce an ambiguity in said position". The "further information" recitation of Claim 14 may include speech input, for example. In that case, the speech input is used "to reduce an ambiguity in said position" in the manner recited in Claim 14.

As discussed above, the spoken inputs described in section 2.1 of the Campus Information System application reflect user queries (such as "Show me Hanne's office"). Section 3 of Brondsted merely refers to providing inputs to the Domain Model module in order to answer user's queries. Thus, neither portion of Brondsted teaches use of further information input (such as, for example, spoken information given during a query) to reduce an ambiguity regarding a location.[2]

Accordingly, Bronsted fails to teach at least the Claim 14 recitation of "orienting an instrument with respect to said target to acquire said target in response to said spatial information and said further information to reduce an ambiguity in said position".

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[2] As also noted, the Automatic Pool Trainer application does not even specify the spoken input.

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Reconsideration and allowance of independent Claim 14 is respectfully requested.

Dependent Claims 2, 4, 6, 7 and 15 were also rejected in paragraph 3 of the Office Action as anticipated by Brondsted. Without conceding the patentability per se of dependent Claims 2, 4, 6, 7 and 15, they are distinguishable from Brondsted at least by virtue of their dependency on their respective independent claim. Reconsideration and allowance of Claims 2, 4, 6, 7 and 15 is respectfully requested.

As noted above, dependent Claims 8-10 were rejected in paragraph 4 of the Office Action as unpatentable over Brondsted in view of Poddar. Poddar does not include teachings that cure the deficiencies of Brondsted described above with respect to independent Claim 1. Fundamentally, Poddar teaches the use of particular keywords that typically occur with certain gestures to more accurately identify gestures in themselves. Accordingly, without conceding the patentability per se of dependent Claims 8-10, Claims 8-10 are likewise allowable at least by virtue of their dependencies on independent Claim 1. Reconsideration and allowance of Claims 8-10 is respectfully requested.

Finally, the unapplied art specifically mentioned in paragraph 7 of the Office Action is briefly considered. Both the Johnston and Leibe documents are readily distinguished from the claimed

invention.[3] Johnston describes creation of entities on a map display by drawing on the map and speaking. Among other things, Johnston does not teach locating and displaying an image of a target (or the like) as in the claimed invention. In brief and summary fashion, Sections 6 and 8 of Leibe refer only to gestures being used to select and move objects in a virtual reality environment. Among other things, no "additional" or "further" information is referred to in this context. Moreover, the actual applications of gesture recognition given in Section 8 of Liebe are martial arts gestures (accompanied by martial arts screams) in a reality game and navigation of a 3D terrain.

Although the unapplied art specifically mentioned in paragraph 7 of the Office Action has been addressed, it is respectfully noted that 37 C.F.R. 1.111(c) cited in the Office Action only applies when claims are amended.[4] It is submitted that Applicant's response herein is in full compliance with 37 C.F.R. 1.111(b) and MPEP 714.02.

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[3] The paper copy of Liebe received with the Office Action is a different version than the document found at <ftp://ftp.cc.gatech.edu/pub/gvu/tr/ 1999/99-33.pdf> cited on the cover sheet. The paper copy appears to be a March 2000 version of the document (that is, dated after the filing date of the application). See <http://citeseer.nj.nec.com/leibe00perceptive. html> and <http://www.gvu.gatech.edu/ccg/publications/perceptive-wb-camera-vr2000.pdf>. Correction of this oversight by substitution of the 1999 version of the document in the file wrapper is respectfully requested.

[4] Moreover, when applicable, Section 1.111(c) is not specific and only states that the applicant point out the patentable novelty that applicant thinks the claims present "in view of the state of the art disclosed by the references cited".

The acknowledgement given in the Office Action that Claim 11 includes allowable subject matter is gratefully accepted. However, in view of the above remarks, it is submitted that all of the pending claims in the Application, namely Claims 1, 2, 4 and 6-15, are in shape for allowance. Accordingly, allowance is respectfully requested. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicant's attorney at the number given below.
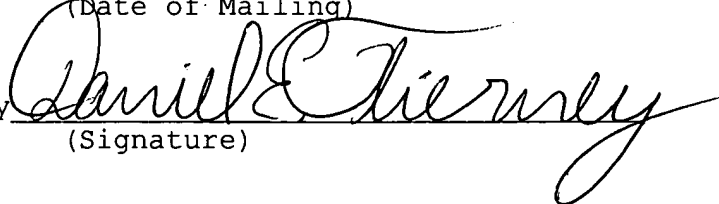
Respectfully submitted,

By _____

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December 15, 2003

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